

Notice of Allowability

Application No.

10/659,680

Applicant(s)

SUNDERMANN ET AL.

Examiner

Art Unit

Samuel A. Barts

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11/18/05.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/545,519.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
- ☒ Examiner's Amendment/Comment
- ☐ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. J. D Evans on 1/9/2006.

This amendment is directed to correcting the claims in minor details. The changes are as follows:

1) In claim 1 the Roman numeral "I" is placed below the formula as oppose to being placed within the formula.

2) It was agreed that the word "ring", which was in the patented claims, was more precise than the word "chain". The examiner has deleted the word "chain" in every claim¹ where it existed and replaced it with the original word "ring".

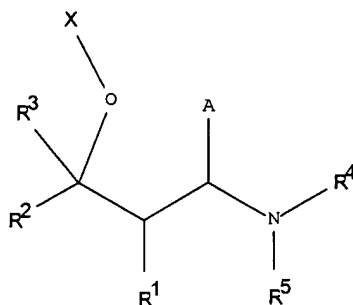
3) The compound "3-Amino-3-arylpropan-1-ol" has been renamed to 3-amino-3-arylpropan-1-ol to make claim 16 consistent with changes made in claim 1.

Please amend claims as follows:

¹ Claim 1-3, 5-10 and 16

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1. A [3-Amino-3-arylpropan-1-ol] 3-amino-3-arylpropan-1-ol compound corresponding to formula I

**I**

wherein

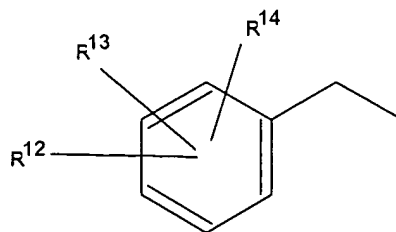
R^1 and R^2 each independently denote C_{1-6} -alkyl, or R^1 and R^2 together form a $(CH_2)_{2-6}$ ring, which can also be benzo-fused or phenyl-substituted;

R^3 denotes H or methyl;

R^4 and R^5 each independently denote C_{1-6} -alkyl, C_{3-6} -cycloalkyl, phenyl, benzyl, or phenethyl, or R^4 and R^5 together form a $(CH_2)_{3-6}$ or $CH_2CH_2OCH_2CH_2$ ring;

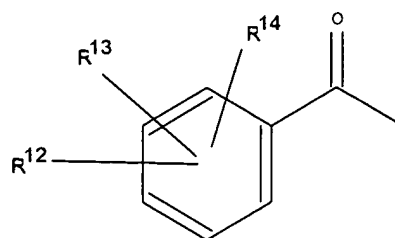
A denotes a substituted or unsubstituted aryl radical, which optionally contains heteroatoms in the ring system;

X denotes a substituted benzyl group corresponding to formula XI

**XI**

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or a substituted benzoyl group corresponding to formula XII

**XII**

wherein

R^{12} to R^{14} each independently denote H, F, Cl, Br, CHF_2 , CF_3 , $[\text{OR}^{11}, \text{SR}^{11}]$ OR^{15} , SR^{15} , OCF_3 , SO_2CH_3 , SO_2CF_3 , C_{1-6} -alkyl, phenyl, CN, $[\text{COOR}^{11}]$ COOR^{15} or NO_2 ,

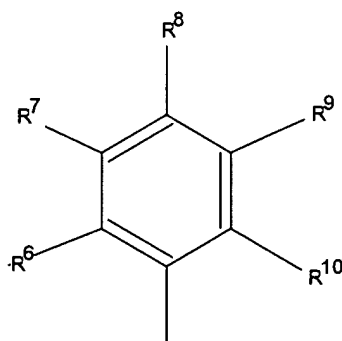
where

$[\text{R}^{11}]$ R^{15} denotes H, C_{1-6} -alkyl, phenyl, benzyl, or phenethyl;

and diastereomers or enantiomers thereof,

or a salt thereof with a physiologically acceptable acid,

with the proviso that if R^1 and R^2 together form a $(\text{CH}_2)_4$ ring, R^3 is H, A is a substituted phenyl group corresponding to formula XIII

**XIII**

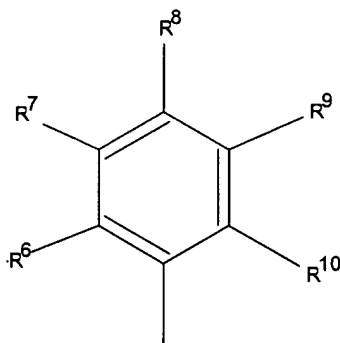
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in which one of R^6 to R^{10} is OH and the remainder of R^6 to R^{10} are H, and X is a benzyl group corresponding to formula XI in which R^{12} to R^{14} are all H, then R^4 and R^5 are not both C_{1-2} -alkyl.

2. A compound according to claim 1, wherein R^1 and R^2 together form a $(CH_2)_6$ ring, which can be benzo-fused or phenyl-substituted.

3. A compound according to claim 1, wherein $[R_1]$ R^1 and R^2 together form a $(CH_2)_4$ ring which can be benzo-fused or phenyl-substituted.

5. A compound according to claim 1, wherein A is a substituted phenyl group corresponding to formula XIII



XIII

wherein

R^6 to R^{10} each independently denote H, F, Cl, Br, I, CF_3 , OH, OR^{11} , OCF_3 , SR^{11} , SO_2CH_3 , SO_2CF_3 , C_{1-6} -alkyl, phenyl, CN, $COOR^{11}$ or NO_2 , or R^6 and R^7 or R^7 and R^8 together form an OCH_2O or OCH_2CH_2O ring, and

R^{11} denotes C_{1-6} -alkyl, phenyl, benzyl, or phenethyl, or a substituted or unsubstituted thiophene radical or furan radical.

6. A compound according to claim 1, wherein R^1 and R^2 together form a $(CH_2)_{2-6}$ ring, which can be benzo-fused or phenyl-substituted, and R^3 denotes hydrogen.

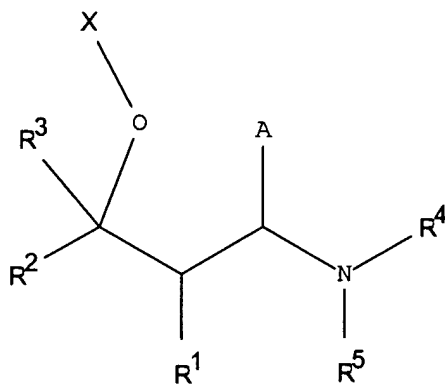
7. A compound according to claim 5, wherein R^1 and R^2 together form a $(CH_2)_4$ -ring, which can be benzo-fused or phenyl-substituted, and R^3 represents hydrogen.

8. A compound according to claim 5, wherein R^1 and R^2 together form a $(CH_2)_4$ -ring, and R^3 represents hydrogen.

9. A compound according to claim 1, [characterized in] wherein R^1 and R^2 together form a $(CH_2)_4$ ring, A represents a substituted or unsubstituted thiophene radical, and R^3 represents hydrogen.

10. A [compounds] compound according to claim 1, wherein R^1 and R^2 together form a $(CH_2)_4$ ring, A represents a substituted or unsubstituted furan radical, and R^3 represents hydrogen.

16. A process for preparing a [compound 3-Amino-3-arylpropan-1-ol] 3-amino-3-arylpropan-1-ol compound corresponding to formula I

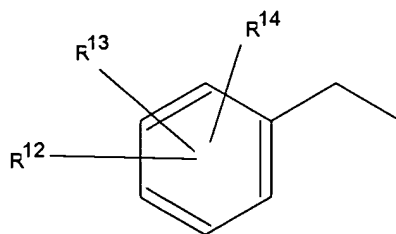


I

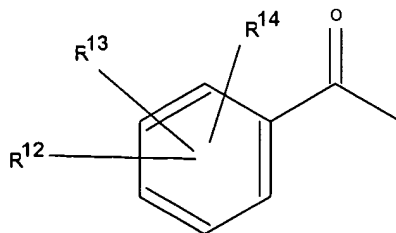
wherein

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- R^1 and R^2 each independently [denote] denotes C_{1-6} -alkyl, or R^1 and R^2 together form a $(CH_2)_{2-6}$ ring, which can also be benzo-fused or phenyl-substituted;
- R^3 denotes H or methyl;
- R^4 and R^5 each independently [denote] denotes C_{1-6} -alkyl, C_{3-6} -cycloalkyl, phenyl, benzyl, or phenethyl, or R^4 and R^5 together form a $(CH_2)_{3-6}$ ring or $CH_2CH_2OCH_2CH_2$ ring;
- A denotes a substituted or unsubstituted aryl radical, which optionally contains heteroatoms in the ring system;
- X denotes a substituted benzyl group corresponding to formula XI

**XI**

or a substituted benzoyl group corresponding to formula XII

**XII**

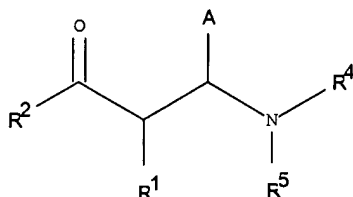
wherein

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R^{12} to R^{14} each independently [denote] denotes H, F, Cl, Br, CHF_2 , CF_3 , $[\text{OR}^{11}, \text{SR}^{11}]$ OR^{15} , SR^{15} , OCF_3 , SO_2CH_3 , SO_2CF_3 , C_{1-6} -alkyl, phenyl, CN, $[\text{COOR}^{11}]$ COOR^{15} or NO_2 , where

$[\text{R}^{11}]$ R^{15} denotes H, C_{1-6} -alkyl, phenyl, benzyl, or phenethyl;

said process comprising reacting a Mannich base corresponding to formula

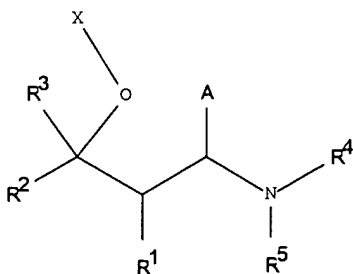
**II**

wherein R^1 to R^5 and A have the meanings given above,

with a Grignard compound of formula $(\text{H}_3\text{C})\text{Y}$, wherein Y denotes MgCl, MgBr, or MgI, or MeLi, or

with a reducing agent,

to give rise to an alcohol corresponding to formula Id

**Id**

wherein R^1 to R^5 and A have the meanings given above; and

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then reacting said alcohol of formula Id with HalX, wherein Hal is a halogen selected from the group consisting of F, Cl, Br, and I, and X has the meaning given above in the presence of an inorganic or organic base at a temperature in the range from 0° to 150°C; or

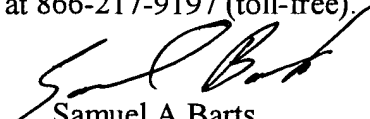
then condensing said alcohol of formula Id with XOH at a temperature in the range from 0° to 150°C;

to obtain said compound of formula I.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Barts whose telephone number is 571-272-2870. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Samuel A Barts
Primary Examiner
Art Unit 1621

SB